

REMARKS**INTRODUCTION:**

Claims 1-28 are pending and under consideration. Claims 1-3, 12-14, 16-24, and 27-28 have been amended. Claim 29 has been cancelled. The amended claims find support throughout the specification, thus, no new matter is being presented. Therefore, approval and entry of the Amendment are respectfully requested

ENTRY OF RESPONSE UNDER 37 C.F.R. §1.116:

Applicant requests entry of this Rule 116 Response because it is believed that the amendment of claims 1-3, 12-14, 16-24, and 27-28 places this application into condition for allowance. Applicant further asserts that the amendments do not significantly alter the scope of the claims and place the application at least into a better form for appeal. As noted above, no new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in §714.12 that "[a]ny amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, §714.13 sets forth that "[t]he Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

Rejection under 35 USC § 102:

Claims 1-3, 5-10, 12-15, 19-23 and 26-29 stand rejected under 35 U.S.C. §102(e) as being anticipated by Cuccia (US 6,337,719). This rejection is respectfully traversed.

Regarding the rejection of claims 1,3, and 28, amended claim 1 recites a method of acquiring program guide information for channels. The method comprises receiving the program guide information and a program on a currently tuned in channel of the channels, acquiring the program guide information for the received program received on the preferential channel, scanning the channels except for the currently tuned in channel and acquiring the remaining program guide information being broadcast for the remaining accessible channels in addition to

the currently tuned in channel after a program guide mode is entered. The remaining program guide information is acquired according to a prioritized channel search. Amended claims 3 and 28 recite substantially similar features as claim 1 including the prioritized search.

Conversely, Cuccia merely discloses a method of updating EPG information. In Cuccia, EPG information is successively gathered from all of the accessible channels in the order of the channels themselves (i.e. channel 1, 2, 3, ..., n) and stores them, as a compound EPG, into a storage unit. According to Cuccia, this operation may take place while the TV-set is in a stand-by mode, because of the extended time required to access all channels, at night, See Cuccia column 4, lines 36-39, when the TV set is turned off, or when a decoupled state is resumed after the TV enters a coupled state. See Cuccia at column 5, lines 20-57.

Cuccia clearly fails to teach or suggest acquiring the remaining program guide information being broadcast for the remaining accessible channels in addition to the currently tuned in channel after a program guide mode is entered, wherein the remaining program guide information is acquired according to a prioritized channel search.

However, in the Office Action at page 5, line 13 through page 6, line 7, the Office Action states that Cuccia discloses acquiring remaining program guide information according to a prioritized or preferential search by the tuner 103 which is free to scan the signals for the EPG information when the TV set is in stand-by mode. The Office Action also alleges in the "Response to Arguments" section of the Office Action, at page 3, lines 1-9, that the claimed prioritized or preferential search is anticipated by the "scanning [of] all available streams." Thus, it is evident that the Office Action is suggesting that a search of a range of transport streams including all available transport streams would effectively include a search of the same streams that a prioritized or preferential scan would search.

Applicant respectfully asserts that the analysis provided by the Office Action is improper. First, applicant initially notes that the claimed invention specifically overcomes the problem of searching "all available streams" or channel by the claimed prioritized search, which is not found in the reference to Cuccia. As a result, the claimed invention has the advantage of not requiring the long period of delay during which "all available streams" are scanned in Cuccia. Secondly, both of the operations during which program guide information, including program guide information for the currently tuned in channel and for the remaining accessible channels, is acquired, occur while a channel is currently tuned in. That is, the language of the claim requires that the TV set must be on and coupled to some sort of a network (via a cable network or a

digital broadcast).

Since Cuccia discloses scanning while the TV-set is in a stand-by mode, because of the extended time required to access all channels, at night, when the TV set is turned off, or when a decoupled state is resumed after the TV enters a coupled state, see Cuccia at column 4, lines 36-39 and column 5, lines 20-57, applicant respectively asserts that claims 1, 3, and 28 are patentably distinguishing over the reference to Cuccia. Thus, these claims are believed to be allowable and applicant therefore requests that the rejection of these claims be withdrawn.

Regarding the rejection of dependent claims 2, 4-11, and 29, applicant notes that these claims are believed to be allowable at least substantially for the reasons set forth above, and therefore applicant requests that the rejection of these claims 2, 4-11, and 29 also be withdrawn.

Regarding the rejections of claims 12 and 19, claim 12 recites a program guiding method in which a program list for each channel is displayed in response to a program guide command. The method comprises writing and displaying a program list including program guide information of a channel currently tuned into before a program guide command is executed by a user and remaining accessible channels, from stored program guide information. Program guide information being broadcast for each of the channels is acquired by searching for the accessible channels in a background operation, while a user refers to the written and displayed program list. The acquired program guide information for each of the channels is stored, a program list on the basis of the stored program guide information is rewritten, and the rewritten program list is displayed to the user. Claim 19 recites substantially the same subject matter as claim 12 including searching for the accessible channels in a background operation.

The claimed "searching for the accessible channels in a background operation...while a user refers to the program list," is supported in the specification with regard to FIGS. 4A-4C. The figures illustrate that while a user refers to program guide information for an exemplary channel 53 in a program list 410, program guide information for other channels, 52 and 54 as shown in FIG. 4B, and then channels 51 and 56 as shown in FIG. 4C, are acquired in the background, while the program list 410 is referred to by the user.

In contrast, Cuccia discloses a significantly different method. In Cuccia, EPG information is updated only once a day, at night, or at a time when the TV is decoupled (i.e. turned off). If for some reason, the TV enters a coupled state, the updating process is actually stopped and only restarted when the TV enters the decoupled state. See Cuccia, column 4, lines 36-55. Considering that it would be impossible for a user to refer to the program list, as claimed, while

the TV is turned off, Cuccia simply could not anticipate “searching for accessible channels to obtain program guide information being broadcast by controlling said tuner in a background operation while a user refers to the program list.”

Nevertheless, at page 9, lines 15-19 of the Office Action, the Office Action alleges that the microprocessor 118, in Cuccia, responds to the manipulation command input by writing a program list based on program guide information stored in said memory and searches for accessible channels by controlling the tuner in a background operation while a user refers to the program list. This analysis, however, fails to consider that even if a user were to refer to a program list during the updating process, as in the case in which the TV enters the coupled state thereby temporarily interrupting the updating process, Cuccia teaches that the updating process is only restarted when the TV is decoupled. See Cuccia at column 2, lines 45-50. As a result, the Cuccia method would not allow a user to refer to a program list while the program list is updated as claimed.

Thus, applicant respectively asserts that claims 12 and 19, are patentably distinguishing over the reference to Cuccia and that claims 12 and 19 are believed to be allowable. Applicant therefore requests the rejections be withdrawn.

Regarding the rejection of dependent claims 13-18, and 20-27, applicant notes that these claims are allowable at least substantially for the reasons set forth above, and therefore requests that these claims also be withdrawn.

Rejection under 35 USC § 103:

Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Cuccia. Claims 11, 16-17 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cuccia in view of Saitoh (US 5,444,499). Additionally, claims 18 and 25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cuccia in view of Saitoh and further in view of Mugura et al. (US 6,243,142). These rejections are respectfully traversed.

Regarding the rejection of claims 4, 11, 16-17, 18, 24, and 25, it is noted that these claims are dependent on claims 1, 3, 12, and 19, and therefore are believed to be allowable for at least the reasons set forth above. Therefore, applicant respectfully requests that these rejections be withdrawn.

Applicant's Rebuttal to Office Action's Response To Arguments:

In the "Response to Arguments" section of the Office Action at page 2, line 17 through page 3, line 10, in comments related to the patentability of claims 1, 3, and 28, the Office Action states that "the claimed prioritized...search is anticipated by the scanning [of] all available streams." As discussed above, however, applicant asserts that the reference to Cuccia contains no disclosure of a prioritized search. In other words, where Cuccia simply gathers EPG information successively channel by channel, the claimed invention gathers EPG information according to priority of channels. Therefore, the highest priority channels are accessed first and so on.

Thus, applicant respectively asserts that claims 1, 3, and 28, which claim the prioritized or preferential search, define over the reference to Cuccia, and therefore requests that the "Response to Arguments" section in the Office Action with regard to claims 1, 3, and 28 be withdrawn.

Regarding the "Response to Arguments" section in the Office action with regard to dependent claims 2, 4-11, and 29, applicant notes that the remarks related to these claims are moot for substantially the reasons set forth above, and therefore requests that the "Response to Arguments" section in the Office action with regard to dependent claims 2, 4-11, and 29 similarly be withdrawn.

Regarding the discussion of claims 12 and 19 in the "Response to Arguments" section of the Office Action at page 4, line 11 through page 5, line 8, the Office Action states that "because the user...can display the compound EPG from the storage means during the scanning of all available transport streams," Cuccia anticipates "acquiring program guide information being broadcast for each channel by searching for accessible channels in a background operation while the program list is being referred to."

As discussed above with reference to the example in the specification, the present invention accesses and displays EPG information of channels 53, 52, and 54 and possibly channels 51, and 55 when the program guide mode is entered. Thus, as a user refers to EPG information of channel 53, EPG information of channels 52 and 54 are displayed quickly. Then, as the user refers to EPG information of channels 52 and 54, EPG information of channels 51 and 55 are displayed, and so on.

As explained above, considering that it would be impossible for a user to refer to the

program list while the TV is turned off, in Cuccia, the reference simply could not anticipate "searching for accessible channels to obtain program guide information being broadcast by controlling said tuner in a background operation while a user refers to the program list."

Thus, applicant respectively asserts that claims 12 and 19, define over the reference to Cuccia, and therefore requests that the "Response to Arguments" section in the Office Action with regard to these claims be withdrawn.

Regarding the "Response to Arguments" section in the Office action with regard to dependent claims 13-18, and 20-27, applicant notes that the remarks related to these claims are moot for substantially for the reasons set forth above, and therefore requests that the "Response to Arguments" section in the Office action with regard to these claims be withdrawn.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VERSION WITH MARKING TO SHOW CHANGES MADE

IN THE SPECIFICATION

Please **AMEND** the page 11, first full paragraph starting on line 4 and ending on line 7, as follows:

--The microprocessor 60 controls tuning of the tuner [60] 50 in the background operation while the program list is displayed on the CRT 64, i.e., while the viewer does not watch any broadcast program via the tuner, to obtain EPG information of the accessible channels.--

IN THE CLAIMS

Please **AMEND** claims 1-8, 10-14, 16-25, and 27, as follows. The remaining claims are reprinted, as a convenience to the Examiner, as they presently stand before the U.S. Patent and Trademark Office.

1. **(TWICE AMENDED)** A method of acquiring program guide information for channels, comprising

receiving the program guide information and a program, and acquiring the program guide information for the received program; and

acquiring the remaining program guide information for each channel by scanning accessible channels while [a] the program being received [program] is not displayed.

2. **(TWICE AMENDED)** The method of acquiring program guide information for channels as claimed in claim 1, wherein [the] said acquiring [of] the program guide

information for each channel comprises obtaining the program guide information of the accessible channels by a tuner while the program received by the tuner is not displayed.

3. (ONCE AMENDED) A program guiding method in which a program list for channels is displayed in response to a program guide command, the method comprising [the steps of]:

acquiring program guide information of accessible channels in response to the program guide command;

storing the acquired program guide information;

writing a program list on the basis of the stored program guide information; and

displaying the written program list to a user in response to the program guide command.

4. (TWICE AMENDED) The program guiding method as claimed in claim 3, further comprising [the step of] providing a message indicating that the user must wait until the program list is written.

5. (TWICE AMENDED) The program guiding method as claimed in claim 3, further comprising [the step of]

determining whether the program guide information is effective by comparing a current time to an effective period of stored program guide information, and

proceeding to [the program list] said writing [step] the program list when the stored program guide information is effective, before [the step of] said acquiring the program guide information.

6. (TWICE AMENDED) The program guiding method as claimed in claim 3, wherein [the step of] said acquiring the program guide information comprises [the steps of]:

writing and displaying a program list including the program guide information of channels tuned before a program guide command is executed, from the stored program guide information, and

acquiring the program guide information for each channel by searching for the accessible channels in a background operation while the program list is referred to.

7. (TWICE AMENDED) The program guiding method as claimed in claim 3, wherein [the] said acquiring the program guide information [step] comprises [the step of] determining the sequence of accessing channels by proximity of channels to the channel tuned before the program guide command is executed.

8. (TWICE AMENDED) The program guiding method as claimed in claim 7, wherein [the] said acquiring the program guide information [step] comprises [the step of] determining the order of priority of channels having the same proximity to the channel

tuned before the program guide command is executed according to a channel up/down command input before corresponding channels are accessed.

9. (NOT AMENDED HEREIN) The program guiding method as claimed in claim 7, wherein an upward or downward direction is preferential when no channel up/down command is executed.

10. (TWICE AMENDED) The program guiding method as claimed in claim 3, wherein [the] said acquiring the program guide information [step] comprises [the step of] searching channels upward or downward from the channel tuned before the program guide command is executed.

11. (TWICE AMENDED) The program guiding method as claimed in claim 3, further comprising [the step of] writing a probability distribution of tuned channels, wherein said acquiring the program guide information comprises searching the channels [are searched for] in an order of priority according to a probability distribution of channels [in the acquiring step].

12. (TWICE AMENDED) A program guiding method in which a program list for each channel is displayed in response to a program guide command, the method comprising [the steps of]:

writing and displaying a program list including program guide information of channels tuned before a program guide command is executed, from stored program guide information;

acquiring program guide information for each channel by searching for accessible channels in a background operation while the program list is referred to;

storing the acquired program guide information for each channel;

rewriting a program list on the basis of the stored program guide information;

and

displaying the rewritten program list to a user.

13. **(TWICE AMENDED)** The program guiding method as claimed in claim 12, wherein [the guide information] said acquiring [step] the guide information comprises [the step of] determining a sequence of accessing channels by the proximity of channels to the channel tuned before the program guide command is executed.

14. **(TWICE AMENDED)** The program guiding method as claimed in claim 12, wherein [the] said acquiring [step] the guide information comprises determining [determines] an order of priority of channels having the same proximity to the channel tuned according to a channel up/down command input before corresponding channels are accessed.

15. (NOT AMENDED) The program guiding method as claimed in claim 13, wherein an upward or downward direction is preferential when no channel up/down command is applied.

16. (TWICE AMENDED) The program guiding method as claimed in claim 11, wherein [the guide information] said acquiring the guide information [step] comprises [the step of] searching channels upward or downward from the channel tuned before the program guide command is executed.

17. (ONCE AMENDED) The program guiding method as claimed in claim 11, further comprising [the step of] writing a probability distribution of tuned channels, and wherein the channels are searched for in the order of priority according to the probability distribution of channels [in the search step].

18. (TWICE AMENDED) The program guiding method as claimed in claim 11, wherein [the display] said displaying the written program list [step] comprises [the steps of]
displaying a message indicating a status of program guide information in response to the program guide information of a corresponding channel not being stored, and
displaying the program guide information of a corresponding channel in response to acquiring the program guide information of channels tuned before the program guide command is executed being acquired in [the] said acquiring the program guide information [step].

19. (THREE TIMES AMENDED) An apparatus for acquiring program guide information of accessible channels and guiding program guide information acquired in response to a program guide command in a multichannel receiver, the apparatus comprising:

a tuner tuning a channel;

a program guide information detector [, coupled to the tuner,] detecting program guide information introduced via [the] said tuner;

a memory [, coupled to the program guide information detector,] storing the program guide information for each channel detected by [the] said program guide information detector;

a key input introducing a user manipulation command such as a program guide command or a channel search command;

a microprocessor, [coupled to the key input unit, to the tuner, and to the memory,] in response to the manipulation command input via said key input, that

[and writing] writes a program list based on program guide information stored in [the] said memory [in response to the manipulation command input via the key input], and

searches [searching] for accessible channels [in response to the manipulation command input via the key input] by controlling [the] said tuner in a background operation while a user refers to the program list; and

a character signal generator [, coupled to the microprocessor,] generating a character signal corresponding to the program list written by [the] said microprocessor and providing the character signal to a screen.

20. (TWICE AMENDED) The apparatus for acquiring and displaying a program guide command as claimed in claim 19, wherein [the] said microprocessor determines the sequence of accessing channels by the proximity between channels to the channel tuned before the program guide command is executed.

21. (TWICE AMENDED) The program guiding apparatus as claimed in claim 20, wherein [the] said microprocessor determines the order of priority of channels having the same proximity according to a user's channel up/down command input via [the] said key input before corresponding channels are accessed.

22. (TWICE AMENDED) The program guiding apparatus as claimed in claim 21, wherein [the] said microprocessor searches for channels preferentially in an upward or downward direction when no channel up/down command is executed.

23. (TWICE AMENDED) The program guiding apparatus as claimed in claim 19, wherein [the] said microprocessor searches for channels upward or downward from the channel tuned before the program guide command is executed.

24. (TWICE AMENDED) The program guiding apparatus as claimed in claim 19, further comprising a probability estimator [, coupled to the microprocessor,] calculating a probability that channels are to be selected, by accumulating a number of times which the channels are tuned, wherein [the] said microprocessor searches for the channels in an order of priority according to a probability of tuning by the channels calculated by [the] said probability estimator.

25. (TWICE AMENDED) The program guiding apparatus as claimed in claim 19, wherein [the] said microprocessor provides to [the] said character signal generator a status message on a message screen in response to the program guide information of a corresponding channel not being stored.

26. (NOT AMENDED) The method as recited in claim 1, wherein the accessible channels include channels accessed by a tuner and channels provided by a line input.

27. (ONCE AMENDED) The program guiding method as recited in claim 3, wherein [the] said acquiring [step] the program guide information comprises [the step of] determining the sequence of accessing channels by proximity of the channels to the channel tuned and by a channel up/down command input just before a channel search is determined.

28. (NOT AMENDED) An apparatus comprising:

means for detecting program guide information corresponding to channels in relation to a tuned channel; and

means for searching for accessible channels of the channels based upon a command received, the program guide information, and a relation to the tuned channel.

29. (NOT AMENDED) The apparatus according to claim 28, wherein the means for searching searches the accessible channels in a preferential manner.